The Trechinae (Coleoptera, Carabidae) from Northern Vietnam

I. Two New Species from Mt. Tam Dao¹⁾

 $\mathbf{B}\mathbf{y}$

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Abstract A new genus and two new species of trechine beetles are described from Mt. Tam Dao in Vinh Phu Province of northern Vietnam. One of them, named *Trechus vietnamicus*, resembles *T. bakeri* JEANNEL from the Island of Luzon in the Philippines, but appears to belong to a different species-group. The other also belongs to the *Trechus* complex but forms a new genus of its own mainly because of the peculiarities of the protarsi and genitalia in the male. It is an unusually small species, and is named *Vietotrechus minutissimus*.

Very little has been known about the trechid fauna of Vietnam (Uéno, 1982, p. 76). So far as I am aware, only four species of this subfamily have previously been described. Two of them are perileptines rather widely distributed in Southeast Asia, that is, *Perileptus pusillus* Jeannel (1923, pp. 397, 402, fig. 4, 1926, pp. 407, 417, figs. 198–199; Uéno & Yin, 1993, p. 70) and *Neoblemus bedoci* Jeannel (1923, pp. 410, 412, fig. 8, 1926, pp. 434, 436, figs. 217–221; Uéno & Yin, 1993, p. 74). The other two belong to the tribe Trechini, and to two phylogenetically different groups. One of them is *Agonotrechus tonkinensis* Jedlicka (1939, p. 1) of the *Agonotrechus* group, and the other is *Trechiotes perroti* (Jeannel, 1954, p. 13, fig. 3) of uncertain affinity. All these species are fully winged and no doubt capable of flight, though they have been recorded, in Vietnam, only from their type localities.

Truly localized, flightless trechines also occur in Vietnam. One of such species was first obtained by Pocs in the autumn of 1963 on Mt. Tam Dao in Vinh Phu Province. The single specimen then known has been preserved in the Természettudományi Múzeum, Budapest, and was submitted to me for taxonomic examination through the courtesy of the late Dr. Zoltán KASZAB. Unfortunately, however, I was unable to describe this strange species in his lifetime because of paucity of the available material. At last in the spring of 1993, a second specimen of the same trechine was brought about by Mr. Kouichi MATSUMOTO, which made me confident of its systematic status.

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In the autumn of 1994, I organized an entomological expedition to northern Vietnam. This was preliminary, since reliable information on the present condition of Vietnamese mountains was extremely scarce, with the exception of that of Mt. Tam Dao, and therefore we had to look through the mountainous areas before undertaking more intensive survey. Five Japanese entomologists, all very good field researchers, participated in this project, and with the aid of the staff of Hanoi Agricultural University, made several trips into the mountains.

As was apprehended, many mountains in northern Vietnam were completely deforested to their tops like those of southern China. We were frequently disappointed at the meagreness of the insect fauna after long trips through denuded areas. However, once a good natural forest is encountered, especially at the upper part of a mountain of moderate height, various autochthonous things can be found there, which showed that the original fauna of northern Vietnam must have been rich and very interesting. One of such exceptional places is the so-called Tam Dao, which is a peak of the Giai Tam Dao about 50 km northnorthwest of Hanoi.

This mountain range is a kind of southeasterly continuation of the Gam Arc, but is separated from the northern mountains by a low pass to the northwest of Lake Ho Nui Coc and forms a narrow isolated range straightly extending from northwest to southeast for about 50 km. The village of Tam Dao lies at its southeastern part, and though the lower half of the mountain was once deforested and has been changed into pine plantation, a beautiful natural forest has been preserved at its upper part. We were able to obtain two species of remarkable trechines in this forest.

Though we failed in obtaining any of the two trechines previously described from northern Vietnam, we collected eight species of the Trechinae by the 1994 expedition, two perileptines and six trechines. Five of the latter seem to be new to science, but as three of the five are known from only one or two specimens, I prefer to postpone their descriptions until some more additional materials are collected by future investigations. Incidentally, no eyeless trechines were found in the Vietnamese caves we explored, although certain species may occur in some of the numerous limestone caves which have not been examined biologically.

In the first part of this series of papers, I am going to describe the two species obtained on Mt. Tam Dao, which are now known from fairly long series of specimens. One of the two belongs to the grand genus *Trechus*, though its true affinity within the genus is not satisfactorily clear, while the other seems to form a new genus probably derived from a *Trechus*-like ancestor. No relatives of these species have so far been found on other mountains of northern Vietnam. This means that Mt. Tam Dao is peculiar both in its isolated trechine fauna and in harbouring localized trechines in spite of its rather low elevation in a subtropical area.

The abbreviations used herein are as follows: HW – greatest width of head including eyes; PW – greatest width of pronotum; PL – length of pronotum, measured along the mid-line; PA – width of pronotal apex; PB – width of pronotal base; EW – greatest width of elytra; EL – greatest length of elytra; M – arithmetic mean.

I am deeply indebted to the following members of the 1994 expedition for their help in collecting trechid beetles: Dr. Mamoru Owada, Dr. Masataka Satô, Dr. Yoshiaki Nishikawa and Dr. Akiko Saito. Hearty thanks are also due to Professor Ha Quang Hung and other staff of the Department of Entomology, Hanoi Agricultural University, and Mr. Nguyen Thuyet for their kind help extended to us during our field works, to the late Dr. Zoltán Kaszab for submitting the invaluable specimen of *Trechus vietnamicus* to me for taxonomic examination, and to Mr. Kouichi Matsumoto for offering the second specimen of the same species to my study.

Trechus (s. str.) vietnamicus S. Uéno, sp. nov.

(Figs. 1-3)

Length: 3.20–3.60 mm (from apical margin of clypeus to apices of elytra). In habitus, something intermediate between *T. bakeri* JEANNEL (1923, pp. 416, 426, fig. 16, 1927, pp. 157, 165, figs. 545–548; DARLINGTON, 1959, pp. 342, 343) and *T. latior* DARLINGTON (1959, pp. 342, 343, fig. 7), both from Luzon of the Philippines and belonging to the endemic group of *T. bakeri*. Readily distinguished from these and other members of the species-group by the characteristic configuration of the prothorax, with distinct hind angles and narrowly bordered lateral margins. Male genitalia also different from those of the species of the *bakeri* group, above all in the presence of a well differentiated copulatory piece.

Body short and broad, with small head, ample prothorax and short ovate elytra; dorsum well convex, especially in hind body; inner wings absent. Colour black or blackish brown, shiny; lateral parts of pronotum sometimes reddish; clypeus, buccal appendages, antennae and legs reddish brown or yellowish brown; ventral surface more or less reddish, sometimes wholly reddish brown.

Head small, transverse, almost 1.5 times as wide as long, and moderately depressed above; frontal furrows deep throughout, not angulate at middle but widely divergent in front and behind; frons and supraorbital areas moderately convex, the latter being foveolate at the roots of anterior supraorbital setae, which are near to the posterior pair and less distant from each other than the posterior ones; microsculpture distinct, mostly formed by wide meshes; eyes variable in size and usually flatter in \mathcal{L} than in \mathcal{L} ; genae usually short, one-third

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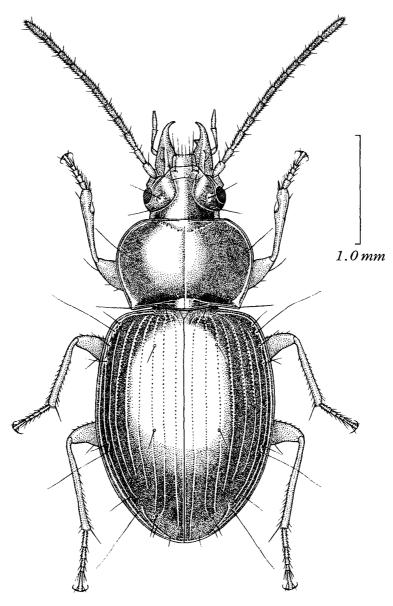


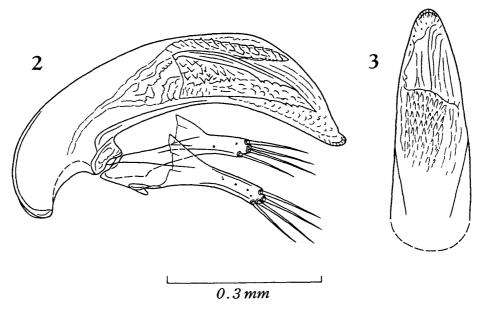
Fig. 1. Trechus (s. str.) vietnamicus S. UÉNO, sp. nov., ♂, from Mt. Tam Dao.

to two-thirds as long as eyes, either straight or feebly convex according to individuals; neck very wide, with the anterior constriction distinct at the sides; labrum transverse, with the apical margin very slightly emarginate; mandibles stout though narrow and sharp at the apical parts, right mandible tridentate, with a distinct premolar tooth; mentum with a simple porrect tooth in apical emargination; antennae thin, filiform, reaching basal fourth of elytra or extending a little beyond that level, segment 2 about five-sixths as long as segment 3 or 4, segments 5–10 gradually decreasing in length towards terminal segment, which is the longest though much narrower than scape, segments 6–8 each cylindrical and more than three times as long as wide.

Pronotum large, transverse, much wider than head, widest at about middle or a little before that level (usually at about five-ninths from base), and much more strongly contracted at apex than at base; PW/HW 1.66-1.79 (M 1.71), PW/PL 1.33-1.44 (M 1.40), PW/PA 1.64-1.77 (M 1.71), PW/PB 1.23-1.32 (M 1.29); sides narrowly bordered throughout though lateral gutters are fairly wide except near front angles and widened in basal fifth, well rounded in front, either feebly arcuate or nearly straight in basal third, and briefly sinuate just before hing angles, each of which forms a rectangular or somewhat obtuse denticle directed laterad, the tip of the denticle being more or less blunt, never acute; apex much narrower than base, PB/PA 1.27-1.43 (M 1.33), either straight or arcuate forwards, with front angles rounded and hardly or only very slightly produced; base bisinuate, arcuate backwards at middle and posteriorly oblique on each side; dorsum convex, with vague, irregularly transverse striations, median line fine though distinct, not reaching apex but reaching base, apical transverse impression usually distinct and more or less crenulate; basal transverse impression linear, almost interrupted at middle, and laterally extending to the bottoms of basal foveae, which are not particularly large but deep and smooth; no postangular carinae; basal area narrow and smooth; microsculpture consisting of fine transverse lines partially forming very transverse meshes, though obliterated here and there.

Elytra short ovate, ample, well convex on dorsum, usually widest at about three-sevenths from base, and more regularly narrowed towards apices than towards bases; EW/PW 1.28-1.37 (M 1.32), EL/EW 1.24-1.33 (M 1.28); shoulders distinct though rounded, with prehumeral borders nearly straight and only very slightly oblique; sides narrowly bordered throughout, very feebly arcuate in front, regularly so behind middle, and rather narrowly and conjointly rounded at apices without appreciable preapical emargination; dorsum well convex, with very steep lateral parts and apical declivity; microsculpture not sharply impressed though consisting of fine transverse lines; striae entire, fairly deep on the disc and distinctly punctate, stria 8 deepened in apical half; scutellar striole deep though not long; apical striole deeply impressed, moderately curved though nearly straight at the anterior part, and free at the anterior end though usually directed to stria 5 (rarely to stria 7); intervals slightly convex on the disc, completely flat at the side, apical carina obtuse; stria 3 with two setiferous dorsal pores at 1/8-1/7 and 1/2-3/5 from base, respectively; preapical pore usually inserted at the apical end of stria 2 (sometimes at the apical anastomosis of striae 2 and 3), a little more distant from apex than from suture and obviously nearer to apical striole than to suture; marginal umbilicate pores perfectly aggregated.

Ventral surface smooth; anal sexual setae as usual. Legs short and fairly stout; protibiae straight, moderately dilated towards apices, each with a deep longitudinal groove on the external face; tarsi short and fairly thick, segment 1



Figs. 2-3. Male genitalia of *Trechus* (s. str.) *vietnamicus* S. UÉNO, sp. nov., from Mt. Tam Dao; left lateral view (2), and apical part of aedeagus, dorso-apical view (3).

about as long as segments 2-3 together in both meso- and metatarsi; in \mathcal{I} , two proximal segments of each protarsus moderately dilated and sharply denticulate inwards at apices.

Male genital organ small and lightly sclerotized. Aedeagus about three-tenths as long as elytra, moderately arcuate especially behind middle, nearly parallel-sided in profile and rather abruptly narrowed towards apex behind apical orifice; basal part not particularly curved ventrad, widely emarginate at the sides of basal orifice, and practically devoid of sagittal aileron, whose vestige is perceptible only under high magnification; viewed laterally, apical lobe very short and fairly broad, slightly turned up at the blunt extremity; viewed dorsally, apical part gradually narrowed towards apex, which is narrowly rounded; ventral margin moderately emarginate behind middle in lateral view. Inner sac armed with a large copulatory piece and a dorso-apical patch of sclerotized teeth; copulatory piece about four-ninths as long as aedeagus, elongated subtriangular and somewhat spatulate, acuminate to a sharp apical point, and with serrate margins in apical part; teeth-patch nearly horizontal, lying at the right dorsal side of copulatory piece. Styles fairly small, with narrow apical parts, left style being longer than the right, each bearing four apical setae.

Type series. Holotype: ♂, allotype: ♀, NW 980 m, 23–IX–1994, S. Uéno leg. Paratypes: 1♂, 950 m, 8–X–1963, T. Pócs leg.; 1♂, NW 980 m, 23–V–1993, K. Matsumoto leg.; 9♂♂, 4♀♀, NW 980 m, 23–IX–1994, S. Uéno & Y. Nishikawa leg.; 2♂♂, 3♀♀, NW 1,010 m, 23–IX–1994, S. Uéno, M. Satô & Y. Nishikawa leg.; 1♀, N 960 m, 25–IX–1994, S. Uéno leg.; 2♀♀, N

1,090 m, 24–IX–1994, S. Uéno leg.; $2 \nearrow \nearrow$, 5 ??, SE 960 m, 22–IX–1994, S. Uéno & Y. Nishikawa leg.

One paratype (Pócs' specimen) is preserved in the collection of the Természettudományi Múzeum, Budapest. All the others including the holotype and the allotype are deposited in the collection of the Department of Zoology, National Science Museum (Nat. Hist.), Tokyo.

Type locality. Mt. Tam Dao, 950-1,090 m in altitude, in Vinh Phu Province of northern Vietnam.

Notes. As was already pointed out, this new species cannot be placed in the bakeri group, mainly because of the difference in genitalic conformation. However, I cannot help speculating that it has been derived from a common ancestor with the Luzon species. It does not belong to any species-groups hitherto recognized, but is closest to the members of the bakeri group so far as concerned with its external morphology. It is possible that a primitive ancestral form of these trechines was carried by a strong westerly wind from somewhere in southern China or northern Vietnam to the Island of Luzon, successfully settled down, and became speciated later without changing primitive condition, but that its mainland cousin underwent selection pressure and evolved into a new type now represented by T. vietnamicus.

This trechine beetle has so far been known from six stations on Mt. Tam Dao. Three of the six lie to the northwest of the village, at the elevations of 980 m, 980 m and 1,010 m, respectively. The first two are situated at two parts of a thick evergreen broadleaved forest, and the third is a small bamboo grove to be described under *Vietotrechus minutissimus*. The fourth station is a small depression at the side of the stepped trail leading to the top; it lies at an elevation of 1,090 m to the north of the village. At these four stations, *T. vietnamicus* was sifted out from heaps of moist dead leaves in shaded places. Condition of existence is similar at the fifth station to the southeast of the village at an elevation of 960 m, though this site is a shallow collapsed ditch shaded by shrubs and tall grasses at the side of an abandoned forestry road. The sixth station is the bank of a narrow stream to the north of the village at an altitude of 960 m. Here a single specimen of the *Trechus* was dug out from a fissure of weathered rock at a depth of about 20 cm.

Thus, T. vietnamicus is primarily humicolous, and though rather widespread on Mt. Tam Dao, it is by no means common. Judging from its unusual occurrence at the sixth station, it may also live under stones in wet forests. This should be confirmed in the springtime, as my observation was made only in the autumn, which was not particularly good for making field works.

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Genus Vietotrechus S. Uéno, gen. nov.

Type species: Vietotrechus minutissimus S. Uéno, sp. nov.

Erected for a very small species of the *Trechus* complex bearing peculiar protarsi and genitalia in the male. Body short, broad and well convex, depigmented, dark reddish brown in colour; surface glabrous and polished on both dorsum and venter, and practically devoid of microsculpture except for head. Inner wings absent.

Head small, transverse, with small eyes and tumid genae, the latter of which are completely glabrous; frontal furrows entire, not angulate at middle, and widely divergent in front and behind; supraorbital pores lying on subparallel lines and close to each other. Labrum transverse, with the apical margin either straight at middle or very slightly bisinuate. Mandibles stout, briefly arcuate near sharp apices; left mandible bidentate, but the right mandible is tridentate, with a large premolar tooth. Mentum free, with a distinct suture behind; mentum tooth porrect, narrow, and pointed at the tip; submentum sexsetose; ligula subtrapezoidal, subtruncated at the apex, with two long setae at middle and three shorter ones on each side; paraglossae thin, extending well beyond ligula. Maxillae long and slender, lacinia moderately arcuate at the apical part and with acute apex. Palpi thick; penultimate segments dilated towards the middle, then short cylindrical and asetose in maxillary palpus, slightly narrowed towards apex and quadrisetose in labial palpus; apical segments elongated subconical, about as long as penultimate segment in maxillary palpus, but evidently shorter than the penultimate in labial palpus. Antennae short and stout, submoniliform.

Pronotum barrel-shaped with rounded corners; sides narrowly bordered throughout and provided with two pair of marginal setae, of which the anterior one is inserted before the widest part and the posterior is on hind angle; median line distinct, but not reaching the two borders; basal transverse impression linear, continuous, and laterally joining side gutters at the bottoms of basal foveae, which are small and mal-defined; basal area very narrow and smooth; no postangular carinae. Scutellum small though distinct.

Elytra suboval and strongly convex, with widely rounded shoulders and lightly arcuate apices; marginal areas very steep; sides rather widely reflexed in humeral parts but narrowly bordered behind, minutely serrulate especially in basal halves and fringed with microscopical hairs; only sutural stria distinctly impressed, though not clear at the basal portion and evanescent on apical declivity, striae 2–4 usually perceptible though very superficial and incomplete, 5–6 sometimes, but not always, perceptible as vestiges, 7 evanescent, 8 deeply impressed at the apicalmost portion though irregular; scutellar striole deeply impressed though very short; apical striole very short but deep, moderately curved, and free at the anterior end, which is directed to the site of stria 5; apical

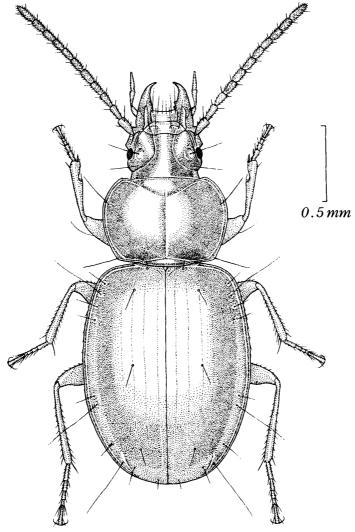


Fig. 4. Vietotrechus minutissimus S. UÉNO, gen. et sp. nov., A, from Mt. Tam Dao.

carina short but sharp; two setiferous dorsal pores present on stria 3, none on the site of stria 5; preapical pore present well before the level of the terminus of apical striole and seemingly on a supposed apical anastomosis of striae 2 and 3; marginal umbilicate pores perfectly aggregated.

Ventral surface smooth; setation of abdominal segments ordinary. Legs short and stout; protibiae straight, moderately dilated towards apices, each with a wide longitudinal groove on the external face, and completely glabrous on the anterior face; tarsi short and thick; protarsi in \mathcal{I} not modified, with neither dilated or spurred segments nor adhesive appendages on the ventral surface.

Male genital organ very small and lightly sclerotized. Aedeagus widely open on the dorsal side from the dorsum of basal bulb to apical orifice, though the base itself is perfectly close at the proximal end; no sagittal aileron; apical lobe short and broad. Inner sac armed with a large copulatory piece and dorso-apical patch 22

of imperfect teeth; copulatory piece anisotopic, spatulate, with the right dorsal edge produced into a very thin apical process about a half as long as the spatulate part of the sclerite. Styles very narrow and arcuate, devoid of ventral apophysis even on left style, each bearing only two short setae at the apex.

Range. Known so far only from the Tam Dao Mountains in northern Vietnam.

Notes. The type species of this new genus looks like a miniature of an Epaphiopsis rather than a Trechus, but is definitely different from the genera of the Epaphiopsis series in the absence of the external series of setiferous dorsal pores on the elytra. Degeneration of the elytral striae in Vietotrechus minutissimus makes it difficult to determine accurate position of the preapical pore, which may not settle on the apical anastomosis of the 2nd and 3rd striae. In any case, Vietotrechus is remarkable in the unmodified protarsal segments in the male, a peculiarity that is only very exceptionally found in the Trechinae (e.g., Cimmerites Jeannel and Jeannelius Kurnakov of the Neotrechus series; cf. Jeannel, 1960, p. 205). It is also characterized by the microscopically serrulate and ciliate lateral borders of elytra and the unique conformation of male genitalia, above all of copulatory piece and parameres.

It seems possible that other species of *Vietotrechus* would be found on the mountains in the westernmost part of Guangxi and the easternmost part of Yunnan if good natural forests are still preserved in those areas of southern China. It is, however, implausible that certain *Vietotrechus* could exist on the mountains of western Yunnan. The reason for this conjecture will be explained in the second part of this series of papers.

Vietotrechus minutissimus S. Uéno, sp. nov.

(Figs. 4-6)

Length: 2.25–2.75 mm (from apical margin of clypeus to apices of elytra). Body short and broad, well convex on dorsum; surface polished; microsculpture distinct on head except for vertex, mostly consisting of wide meshes and partially of isodiametric ones; vestiges of fine transverse lines present on some parts of pronotum, though mostly obsolete; elytra practically devoid of microsculpture. Colour concolorously dark reddish brown, more or less infuscate on scape and along lateral margins, very shiny; apical halves of antennae and tarsi more or less lighter than the remaining parts.

Head small, subquadrate, evidently wider than long, with deep frontal furrows divergent in front and behind; frons and supraorbital areas moderately convex, the latter bearing a large foveole at the root of anterior supraorbital seta; eyes small but gently convex, laterally produced beyond the outline of genae, the latter tumid, about a half to four-fifths as long as eyes; neck very wide, with the

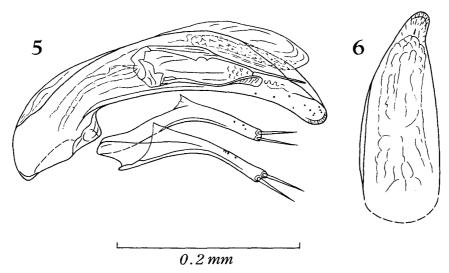
anterior constriction sharply marked at the sides; mandibles stout, though sharp at the apices; antennae short and stout, barely reaching basal sixth to fifth (rarely fourth) of elytra, segment 2 as long as segment 3, segments 4–8 almost equal in length to one another, each ellipsoidal and fully twice as long as wide, segments 9–10 each slightly shorter than segment 8 and the shortest, segment 11 the longest, a little longer but obviously narrower than scape.

Pronotum much wider than head, wider than long, widest at about or slightly before the middle, and a little more strongly contracted at apex than at base; PW/HW 1.54–1.63 (M 1.59), PW/PL 1.25–1.38 (M 1.32), PW/PA 1.51–1.61 (M 1.56), PW/PB 1.22–1.32 (M 1.26); sides moderately arcuate in front but either very feebly so or almost straight in basal third, and not sinuate before hind angles, which are very obtuse and hardly angulate at the corners; apex more or less arcuate forwards, with front angles rounded and hardly produced; base wider than apex, PB/PA 1.18–1.28 (M 1.24), gently arcuate backwards at the median part and slightly oblique on each side; dorsum well convex, with remnant of transverse striations; apical transverse impression distinct though more or less irregular, apical area either smooth or with a few longitudinal wrinkles; basal transverse impression sulciform, deep and smooth; basal area very narrow, transversely carinate.

Elytra suboval, short and broad, widest at about four-ninths from bases, and a little more gradually narrowed towards bases than towards apices; EW/PW 1.36–1.44 (M 1.38), EL/EW 1.28–1.36 (M 1.33); shoulders widely rounded, with prehumeral borders almost perpendicular to the mid-line at the innermost portions; sides feebly arcuate behind shoulders, gently so behind middle, and hardly emarginate before apices, which are conjointly arcuate in a shallow arc, almost subtruncate; dorsum strongly convex, with very steep apical declivity and lateral areas; striation as described under the genus, inner striae indistinctly crenulate; intervals flat, apical carina short but conspicuous; stria 3 with two setiferous dorsal pores at 1/9–1/8 and 3/8–4/9 from base, respectively; preapical pore situated at the upper part of apical declivity and rather widely distant from both apex and suture.

Legs short and stout, with short tarsi; tarsal segment 1 shorter than segments 2-3 together in pro- and mesotarsi, about as long as that in metatarsus.

Male genital organ very small, only a little more than $300 \,\mu m$ long. Aedeagus one-fourth as long as elytra, gently arcuate, moderately depressed, and wholly membraneous on the dorsal surface; basal part fairly large, abruptly bent ventrad, with a large, short oval basal orifice, whose sides are hardly emarginate in profile, and devoid of sagittal aileron; viewed dorsally, apical lobe short, inclined to the left, and rounded at the tip; viewed laterally, apical lobe very broad, gently curved ventrad, gradually narrowed apicad, and widely rounded at the apex; in profile, ventral margin slightly emarginate before middle but distinct-



Figs. 5-6. Male genitalia of *Vietotrechus minutissimus* S. UÉNO, gen. et sp. nov., from Mt. Tam Dao; left lateral view (5), and apical part of aedeagus, dorso-apical view (6).

ly so before apex. Inner sac armed with a large spatulate copulatory piece which is about five-ninths as long as aedeagus including the right apical process and is about two-fifths as long as aedeagus even excluding the process, gradually narrowed apicad, with lateral borders heavily sclerotized and apically produced as two subparallel processes, of which the left one is short and rather broad but the right one is very long, thin and acicular, about a half as long as the spatulate part of the sclerite; dorso-apical patch of teeth mal-differentiated and hardly sclerotized as a whole. Styles unusually narrow and slender, distinctly arcuate, or rather, strongly curved at middle, left style a little longer but not broader than the right, each bearing only two short setae at the apex.

Type series. Holotype: \checkmark , allotype: ♀, 23–IX–1994, S. UÉNO leg. Paratypes: $8 \checkmark \checkmark$, 7 ♀ ♀, 23–IX–1994, S. UÉNO, M. SATÔ & Y. NISHIKAWA leg. All deposited in the collection of the Department of Zoology, National Science Museum (Nat. Hist.), Tokyo.

Type locality. Mt. Tam Dao, 1,010 m in altitude, in Vinh Phu Province of northern Vietnam.

Notes. This interesting species is humicolous, and has so far been known from only a small bamboo grove 7-8 m² in area in an evergreen broadleaved forest to the northwest of the village of Tam Dao. This bamboo grove is very humid and is inhabited by rather a peculiar fauna. Most striking are the present trechine and a very small adeliine tenebrionid to be described by MASUMOTO (1995) under the name Laena vietnamica. They were found by sifting dead leaves of bamboo mixed with those of broadleaved trees. The trechine beetle looked like a tachyine at the first glance, though it did not run about so quickly as most tachyines do. A few specimens of Trechus vietnamicus were also

collected in this bamboo grove, but this species was commoner under broadleaved trees.

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